REMARKS

Claims 1-4, 6-10 and 13-18 are pending in this application. By this Amendment, claims 1 and 7 are amended, and claim 12 is cancelled without prejudice or disclaimer. No new matter is added. Support for the amendments to claims 1 and 7 can be found at, for example, Fig. 4. In view of at least the following, reconsideration and allowance are respectfully requested.

I. Claim Rejections under 35 U.S.C. § 103

The Office Action rejects claims 1, 3, 7, 9 and 13-16 under 35 U.S.C. § 103(a) over U.K. Patent Application Publication No. 2,229,556 (Carpenter) in view of U.S. Patent No. 4,243,922 (Sobotta); rejects claims 2, 6, 8 and 12 under 35 U.S.C. § 103(a) over Carpenter in view of Sobotta and further in view of U.S. Patent No. 6,389,816 (McCarty); rejects claims 4 and 10 under 35 U.S.C. § 103(a) over Carpenter in view of Sobotta and further in view of U.K. Patent No. 1,135,508 (IBM); and rejects claims 17 and 18 under 35 U.S.C. § 103(a) over Carpenter in view of Sobotta and further in view of U.S. Patent No. 6,955,039 (Nomura). These rejections are respectfully traversed.

Independent claims 1 and 7 are not obvious in light of Carpenter and Sobotta.

The Office Action states on page 3 that Carpenter does not expressly teach providing the compensated error signal to the gain selector, wherein the gain selector receives the compensated error signal and provides the gain signal to the controller based on the value of the compensated error signal.

Sobotta teaches supplying an error signal to a circuit (7) which varies the gain of the amplifier (4) where the error signal may have been modified by an impedance network (8) having a frequency dependent transfer function which generates a compensated error signal (column 3, lines 8-13). Further, Sobotta states that the gain control, and hence the error signal, is modified by the frequency response of the impedance network (8). That is, pursuant

to the teachings of Sobotta, the gain is dependent upon the rate of change of the error signal (see column 3, lines 28-33). Further, the compensated error signal of Sobotta is dependent only upon one operating parameter value.

Therefore, even if combinable, Carpenter and Sobotta teach passing the error signal generated by the error generated (322) through an impedance network (8) wherein the output from the network (8) would be used to select the correct gain, and thus generate a signal which is intended to correct the operating parameter (temperature).

In contrast, independent claims 1 and 7 of the presently claimed invention disclose that the compensated error signal is a function of the multiplication of the error signal and the compensation signal. Thus, the compensated error signal is not dependent upon the rate of change of the error signal as Sobotta teaches.

Furthermore, neither Carpenter nor Sobotta would have taught, suggested or disclosed the application of a gain to a compensated error signal, where the gain, and hence the compensated error signal, is a function of an error signal based upon a first operating parameter and a measured second operating parameter. That is, contrary to the assertions made in the Office Action, neither Carpenter nor Sobotta disclose, teach or suggest a disturbance compensator that receives an input value relating to a measured second operating parameter..., receiving the error signal, producing a compensated error signal based on the input valve and the error signal, and providing the compensated error signal, as recited in claim 1, or generating a compensated error signal based on an input value relating to a measured second operating parameter of the controlled apparatus and the error signal, as recited in claim 7.

Indeed, Sobotta teaches that each component of an error signal should be separately amplified by a gain dependent on its own rate of change so that each component of the error signal can be varied by gain control independent of the other operating parameters (see

column 3, lines 52-55). That is, Sobotto teaches varying the gain of each error signal based on the rate of change of that same error signal. The implication is that combining error signals of different parameters and adjusting gain to control one of those parameters, which might not even by the main rate determining factor, is not desirable. Thus, Sobotta teaches away from the features of claims 1 and 7 of the presently claimed invention.

Even if it were possible to modify Carpenter with the teachings of Sobotta, to provide "a compensated error signal to a gain selector and provide the gain signal to the controller based on the value of the compensated error signal," the gain means 330 of Carpenter would apply a gain function, independent from the teachings of Sobotta, to the error signal created by the first different means 332 and as such, the compensated error signal would not be to equivalent to the compensated error signal of the presently claimed invention by virtue of the error signal in Carpenter being processed by a gain means twice (i.e, once prior to being combined with a measured second operating parameter, and once after the compensated error signal is created).

Even further, neither Carpenter nor Sobotta teach the multiplication of the error signal with the compensated signal to create the compensated error signal. In fact, Fig. 3 of Carpenter shows that the first combining method is an adder (i.e., combines the two input signals by addition) by virtue of the '+' symbols. Thus, the compensated error signal of the presently claimed invention is even further distinguished from the applied references.

In summary, Sobotta teaches selecting a gain signal based on a compensated signal, but the system of claim 1 and the method of claim 7 of the presently claimed invention generate a compensated signal in utilizing a different methodology.

According to the Office Action, Carpenter fails to disclose each and every feature of claims 1-3, 6-10 and 13-18. However, for at least the reasons discussed above, it would not

have been obvious to one of ordinary skill in the art at the time of the invention to obtain the features of claims 1-3, 6-10 and 13-18 by combining Carpenter and Sobotta.

Sobotta, McCarty, IBM and Nomura fail to cure the deficiencies of Carpenter. Thus, the applied references, in any combination, fail to teach or suggest the subject matter of independent claims 1 and 7, or the claims depending therefrom. Further, claims 2-4, 6, 8-10 and 13-18 are patentable for at least the reasons that independent claims 1 and 7 are patentable, as well as for the additional features they recite. Withdrawal of the rejections is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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